

questionnaires (main evaluation). Questionnaires were completed around menstruation and mid-cycle in the same individual. Outcome measures included demographic data, symptoms, previous treatments, current medications, absenteeism, presenteeism, HRQoL using SF-36 and EQ-5D. Women with irregular periods or bleeding were not invited to the main evaluation due to difficulty timing questionnaire completion. **RESULTS:** A total of 2699 women participated in the screening questionnaire. 61% of screened women were under 30 years, half had sought medical advice and 25% were currently self-medicating for their periods. Patients were severely affected as noted on the following measures. Symptoms: 84% report physical symptoms, 78% psychological symptoms and 41% bleeding issues. Absenteeism: 21% take > 1-2 days off per month due to their period. Presenteeism: 33% reduction in workplace performance versus referent populations. 331 women participated in the main evaluation. From this, there was a significant difference in HRQoL between the worst and best times of the menstrual cycle: EQ5D questionnaire 0.57 to 0.76 (difference 0.167, $p < 0.001$); EQ5D VAS 64.3 to 77.7 (difference 11.0, $p < 0.001$); SF6D 0.61 to 0.72 (difference 0.1, $p < 0.001$). **CONCLUSIONS:** This evaluation shows that women suffering from problem periods have a significant impairment of their QoL and productivity in spite of treatment. A need exists for treatment that can alleviate these symptoms, enable more productive lives and improve the overall quality of life in these women.

PIH33

UTILITY AND HUMAN CAPITAL LOSS IN ASTHMA, CHRONIC OBSTRUCTIVE PULMONARY DISEASE AND RHEUMATOID ARTHRITIS – THE IMPACT OF PREVALENCE, DISEASE SPECIFIC MORTALITY AND UTILITY DECREMENT ON OVERALL HEALTH BURDEN

Meszaros A¹, Agh T¹, Inotai A²

¹Semmelweis University, Budapest, Hungary, ²Syreon Research Institute, Budapest, Hungary

OBJECTIVES: Asthma, chronic obstructive pulmonary disease (COPD), rheumatoid arthritis (RA) are chronic conditions with different prevalence, mortality, effect on patient's quality of life (QoL). The aim of this study was to compare the human capital loss and utility of patients in these conditions with the general Hungarian population; and to estimate the impact of utility decrement and disease specific mortality on the overall health burden in these diseases. **METHODS:** QoL was assessed with the EuroQoL EQ-5D in cross sectional non-interventional studies. Overall annual health loss due decreased QoL was estimated by multiplying number of patients with the utility decrement. Overall annual years of life loss due premature mortality was calculated by multiplying crude age/disease/gender specific mortality with age/gender specific life expectancy, age/disease/gender specific utility and the number of inhabitants in the age cohort. The aggregation of these expressed the total annual health loss in quality adjusted life years (QALYs). **RESULTS:** A total of 869 consecutive patients were recruited (402 with asthma, 214 with COPD and 253 with RA). Utility values among patients were significantly lower compared to the general population in all age cohorts ($p < 0.001$). RA was associated with significantly lower utilities compared to asthma between the ages of 45 to 64, and compared to COPD between the ages of 45 to 74 ($p < 0.05$). There was, however, no significant difference between QoL of the two respiratory disorders. Based on conservative estimates (e.g. considering age between 45-84), asthma, COPD and RA contribute to a total annual health loss of 20905, 66911 and 10660 QALYs in Hungary, respectively. **CONCLUSIONS:** The three conditions result in considerable QALY loss to the Hungarian society. Our results outline the importance of the overall health burden calculations, since utility decrement has a significant impact on Human capital loss and provides important data for decision makers.

PIH34

IDENTIFYING INDIVIDUALS WITH DIFFERENT TIME PREFERENCES IN TIME TRADE-OFF VALUATIONS OF HYPOTHETICAL HEALTH STATES: A LATENT CLASS ANALYSIS OF THE US EQ-5D-3L VALUATION DATA

Luo N

National University of Singapore, Singapore, Singapore

OBJECTIVES: In theory, time preference, or discounting, affects health-state valuation using the time trade-off (TTO) method. This study aimed to determine individuals with different time preferences in the general US population using the latent class analysis (LCA). **METHODS:** LCA was performed with valuation data from the US Valuation of EQ-5D Health States Study. In that study, 42 EQ-5D-3L health states and 'unconsciousness' were categorized into 5 blocks for each respondent to value one randomly selected block of health states ($n=13$). Separate LCA was conducted for respondents valuing the same block of health states. **RESULTS:** Modeling outputs were consistent across the 5 subgroups. The 3-class model was adopted to reflect the hypothesized effects of time preferences on valuations. The first class (size: 53.1% of the general US population) was recognized as the average individuals. The mean health-state preference scores derived from this class ranged from -0.185 to 0.920. The second class (size: 34.4%) was a group of individuals with a low time preference. The mean health-state preference scores ranged from 0.056 to 0.963. Compared with those in class one, individuals in class two were more likely to be Hispanic or black, married or never married, and comment that the TTO valuation tasks was very easy to do. The third class (size: 12.5%) comprised individuals with a high time preference. The mean health-state preference scores derived from this class ranged from -0.605 to 0.655. Individuals in this class were older and more likely to be female, Hispanic, poorly educated, with lower income, and divorced or widowed. **CONCLUSIONS:** This study provides evidence for the existence of individuals with high and low time preferences in the general US population. Future valuation studies using the TTO method should explicitly measure respondents' time preferences and investigate the effects of time preferences on health-state valuations.

PIH35

DISABILITY-ADJUSTED-LIFE-YEARS (DALYS) LOSS IN POSTMENOPAUSAL WOMEN WITH OSTEOPOROSIS

Darba J¹, Kaskens L², Perez-alvarez N², Palacios S³, Neyro JL⁴, Rejas J⁵

¹Universitat de Barcelona, Barcelona, Spain, ²BCN Health, Barcelona, Spain, ³Instituto Palacios de Salud y Medicina de la Mujer, Madrid, Spain, ⁴Hospital Universitario Cruces, Baracaldo (Vizcaya), Spain, ⁵Pfizer España, Alcobendas/Madrid, Spain

OBJECTIVES: To estimate the disability-adjusted life years (DALYs) lost in a nationwide representative sample of postmenopausal women with osteoporosis. Effect of previous bone fracture and type of drug-based therapy of osteoporosis were also explored. **METHODS:** DALYs were estimated based on patients' clinical characteristics and Health-Related Quality-of-Life (HRQoL) data from a cross-sectional, epidemiological one-visit study (the GINERISK study). The study enrolled postmenopausal women (at least 12-month after last menstrual period) with osteoporosis, above 18-years old, who were attending outpatient clinics of Gynecology in Spain. Socio-demographics, bone densitometry (BD) and HRQoL were recorded. HRQoL was assessed using the generic SF-12v2 questionnaire, which was used to derive disability values. Mortality rates were extracted from the Spanish national statistics database. DALY's were calculated according to Fox-Rushby and Hanson (2001) and ANCOVA models, adjusted for age, BD, previous osteoporotic bone fractures (BF), treatment with calcium or calcium+vitamin D, exercise and number of risk factors for osteoporosis, were used for comparative purposes. **RESULTS:** DALYs could be computed in 2,782 (67%) out of 4,157 postmenopausal women, with a mean (95% CI) age of 61.0 (60.7-61.2) years. Mean overall undiscounted DALY's lost per women were 6.1 (5.9-6.2), with a significantly higher loss in women with previous BF; 7.8 (7.2-8.4) in comparison with women without BF [5.8 (5.6-6.0)] or osteoporotics with a BD > -2.5 T-score after receiving a drug-based therapy [6.2 (5.8-6.5)]; $F=27.0$ ($P < 0.01$). A model explaining the variation in the levels of health was found which included the use of a SERM-based therapy, age, previous osteoporotic BF and the number of risk factors for osteoporosis as significant predictors ($P < 0.05$). **CONCLUSIONS:** DALY's loss was considerable amongst postmenopausal women with osteoporosis. The use of a SERM, not having previous osteoporotic bone fracture, having less osteoporotics risk factors and being older showed to be linked to less DALY's lost.

PIH36

QUALITY OF LIFE OF MEDICAL UNIVERSITY OF WARSAW FACULTY OF PHARMACY STUDENTS IN 2010-2012

Zawodnik S¹, Krancberg AN¹, Hermanowski TR¹, QOLSWG Quality of Life Students Working Group²

¹Medical University of Warsaw, Warsaw, Poland, ²Department of Pharmacoeconomics, Medical University of Warsaw, Warsaw, Poland

OBJECTIVES: To measure Health Related Quality of Life among Pharmacy students at the Medical University of Warsaw and compare results for years 2010-2012. **METHODS:** In the same period of years 2010-2012, students from the Faculty of Pharmacy, Medical University of Warsaw were surveyed with a set of HRQoL questionnaires. The survey was conducted in the middle of the semester, when students have no exams, nor tests and was a part of long-term Pharmacoeconomic Student Chapter's project. Students self-completed pen and pencil versions of questionnaires and didn't receive any compensation. They were asked to give information regarding sex, age, year of study, average grade during the previous year of study and to complete final official Polish version of EQ-5D-5L, followed by EQ-VAS, SF-36v.1 and EQ-5D-3L. **RESULTS:** In the study period, 444, 369 and 364 students responded from each year respectively and the results were included in the final analysis. Concerning SF-36 dimensions, students reported major problems in vitality; 52.54 ± 15.19 ; 53.32 ± 18.17 ; 46.67 ± 18.23 as opposed to physical functioning 96.57 ± 3.75 ; 95.64 ± 8.28 ; 94.15 ± 9.39 . Mean rate of own health on EQ-VAS was 79.23 ± 10.61 ; 80.13 ± 15.00 ; 76.05 ± 17.30 and mean EQ-5D index, based on Polish TTO value set, was 0.94 ± 0.07 ; 0.94 ± 0.07 ; 0.91 ± 0.11 (in the range from -0.523 to 1). In 2010 and 2011 students of 3rd year and 1st year reported lowest QoL independently of the measure used: EQ-VAS and EQ-index, respectively. In 2012 students of 2nd year reported lowest QoL measured by EQ-VAS 70.33 ± 20.63 and 3rd year measured by EQ-index 0.89 ± 0.13 . **CONCLUSIONS:** Generic questionnaires used in the survey are sensitive enough for measuring quality of life in young and relatively healthy population. Assessment of HRQoL was similar in years 2010 and 2012. The survey needs to be continued next year.

PIH37

TRENDS OF QUALITY OF LIFE IN SOUTH KOREAN ADULTS DURING 2007-2010

Chang CW¹, Choi IS¹, Lee SM², Suh DC³

¹Rutgers University, Piscataway, NJ, USA, ²Chung-Ang University, Seoul, South Korea, ³College of Pharmacy, Chung-Ang University, Seoul, NJ, South Korea

OBJECTIVES: To investigate trends of the quality of life in South Korean adults aged 19 and older using Korean National Health and Nutrition Examination Survey (KNHANES). **METHODS:** This study used the 2007-2010 Korean National Health and Nutrition Examination Survey (KNHANES), a nation-wide survey on various health-related questions for a nationally representative sample of the non-institutionalized population of South Korea. Quality of life (QOL) was measured using the EQ-5D instrument and the QOL index scores were calculated based on Korean version of the score calculation algorithm. Trends of QOL index and factors influencing QOL index scores were analyzed using analysis of variance and ordinal least square regression after adjusting for the study variables. **RESULTS:** A total of 23,777 adults were identified during 2007 to 2010. Mean age was 44.7 years and 50.5% were female and 68% were graduated from high schools or colleges and 31% had the body mass index ≥ 25 . Hypertension was most prevalent chronic disease (16.5%), followed by arthritis (13.3%), hyperlipidemia (7.0%), and diabetes (6.3%). The overall EQ-5D in-